

Pollution Prevention Tools & Techniques

Integrating Pollution Prevention into
Manufacturing Improvement
For the
Michigan
Retired Engineer Technical Assistance Program
(RETAP)
Department of Environmental Quality
(DEQ)

Grand Rapids, Michigan
May 21 – 24, 2002

Presented by:

*Cam Metcalf, Executive Director
Richard Meisenholder, Technical Coordinator
Lori Hoetker, P2 Specialist*



Kentucky
Pollution
Prevention
Center

www.kppc.org

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**P2 Technical Assistance Training Agenda
For
Pollution Prevention Tools & Techniques
MI DEQ and MI RETAP**

Location and Dates: Grand Rapids, MI – May 21 – 24, 2002

Presenters: **Cam Metcalf**, Executive Director, **Richard Meisenhelder**, Technical Coordinator, and **Lori Hoetker**, P2 Specialist for the Kentucky Pollution Prevention Center (KPPC), University of Louisville.

Objective: The training will be geared to planning and assessing site-specific P2 opportunities at an organization as a means to achieving and exceeding compliance requirements, reducing risks, and reducing costs. Attendees will be able to recognize pollution prevention/waste reduction opportunities and promote those opportunities to organizations. The major focus of the training will be on building confidence in the planning and assessment process and competence in appropriate technical details associated with feasibility and implementation of P2 opportunities. As part of the training program, we will address both process- and waste-specific opportunities for reducing multimedia pollutants.

Attendees will be made aware of how to obtain and use available P2 and waste reduction information and assistance resources. Hands-on, adult training techniques will be used throughout the training workshop. Exercises involving role-playing will prepare the attendees for the on-site assessments. On Day 3 of the workshop, assessments of industrial processes and waste streams will be performed by attendees. Characterization of multimedia waste generation at the assessed facilities will be accomplished using flow diagrams and waste reduction options will be outlined for presentation to the other attendees during Day 4 of the workshop.

This training program is built around information from many sources that will be combined into a Resource Training Materials package as a handout. Each attendee will receive a copy of the manual and pertinent handouts during the course.

DAY 1 (Tuesday – May 21, 2002)

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| 8:00 AM | Welcome, Introductions & Orientation (Training manuals handed out.) |
| 8:15 AM | Definitions: What are the common terms used throughout the workshop?
P2 and Waste Reduction Trends |
| 9:05 AM | Exercise: What is and is <u>Not</u> P2? (Group will discuss scenarios answers.) |
| 9:15 AM | BREAK |
| 9:30 AM | P2 Assessment Protocol
Procedures, What to Look For, Taking Notes & Report Writing |
| 10:30 AM | Exercise: Assessment Procedure Development – Group First Draft: Identification of Preassessment, On-site and Post-Assessment Information Needs. (Handouts: Preassessment Letter and Questionnaire, Preassessment Briefing and Checklists. |

Use Preassessment Questionnaire and mark the info you would really like to have.)

10:45 AM BREAK

11:00 AM Developing Quality P2 Opportunity Recommendations
Measuring Process Improvements (Developing Baseline Information)
Encouraging adoption of P2 Technology

12:00 – 1:00 PM Will Be Provided

1:00 PM Mock Industrial Processing: Group will participate in the operation of a mock industrial production process producing solid and hazardous wastes. Production pressures are simulated in this Play-Doh “Fun Factory” training exercise. (Fun Factories and Play-Doh)

Assessment Procedure Development: P2/Waste Reduction Options Identification for Mock Industrial Process (Group will assess “Fun Factory” process to identify options to improve quality control and reduce process and cleanup wastes.)

1:45 PM P2 Follow-up: Measuring Implementation and Program Success
How to get the information you need to determine P2/waste reduction benefits (Technical Assistance Post-Assessment Evaluation)

2:15 PM BREAK

2:30 PM EPP and Affirmative Procurement Procedures (AP2)
Buy Clean Initiative Information

3:20 PM Solid Waste Data: Types, Amounts and Costs
Inventory Control
Managing the Suppliers/Contractors “Packaging”
Packaging Reduction/Returnable Containers

4:10 PM Food Processing P2

4:45 PM Q & A Session and Adjourn

DAY 2 (Wednesday – May 22, 2002)

8:00 AM P2 in Specific Industries and Specific Technologies
Dry Cleaners
Vehicle Maintenance

9:00 AM BREAK

9:15 AM Metal Fabrication: Metal Cutting and Stamping and Fluids Management Program

10:15 AM BREAK

- 10:30 AM Electroplating Process: Why plate? If you have to, make sure you're doing it right!
- 11:30 AM Will Be Provided
- 12:30 PM Metal Painting
Exercise: Using MSDSs to determine Tons/yr. of VOCs from painting
- 1:45 PM BREAK
- 2:00 PM Energy Efficiency (E2)
Air compressors and dryers and Power Factor/Peak Electrical Demand
- 3:15 PM BREAK
- 3:30 PM P2 for Printing Processes
- 4:15 PM On-site Industry Assessments: Attendees will sign-up for team assessments and meet with other team members to target specific waste streams. Collecting available reporting resources on-site is important for preassessment identification and targeting of waste streams for P2 and waste reduction options.
- Assessment Procedure Development: Characterization of Waste Generation. Success of any assessment will depend on readily available information on processes, wastes and releases. Using available Hazardous Waste Annual Reports and Toxic Release Inventory (TRI) Data, the team will characterize waste generation in the facilities to be visited. Attendees will finalize assignments and car pooling/parking details.
- 5:00 PM Adjourn or Stay until everyone feels ready for the Day 3 On-site Assessment.

DAY 3 (Thursday – May 23, 2002 – On-site Assessments)

Objective: Using information and assessment procedures developed to this point, attendees will conduct on-site assessments of selected facilities and processes in small groups with KPPC and MI RETAF team leaders. Attendees will experience the attitude of management and what has motivated the need for a P2/waste reduction assessment. Management's commitment to a P2/waste reduction program and the success of the assessment will be dependent upon the amount and types of information available on processes, wastes, releases, costs and the person responsible for the on-site tour. Attendees will be called upon to use motivational, industrial salesmanship during the assessment to gain management support, to develop P2/waste reduction options involving operational employees, and to provide available resources that will inspire an on-going P2 program. The groups will develop recommendations for each area assessed that will help initiate a final report to be forwarded to the facility's management for consideration.

- 8:00 AM Groups travel to facility to perform assessment with the KPPC and MI RETAF team leaders. All attendees will participate in introductions to personnel and facility ground rules as part of the preassessment briefing and start of data collection.
- 12:30 – 1:30 PM Lunch on your own as a Group!
- 2:00 PM Assessment teams will return to training facility for discussion of collected information and brainstorming potential P2/waste reduction options. Groups will develop a P2/waste reduction report outline for each facility visited. The focus will be on two major areas: process flow diagrams with waste streams identified; and identification of P2/waste reduction options. Each group will choose a spokesperson(s) to highlight findings and recommendations.
- 3:15 PM Assessment P2 Technology Resources: Internet sites (Teams will locate P2 resources for development of recommendations.)
- Exercise: Solvents Alternative Guide (SAGE) (Teams will select one of 3 scenarios and answer SAGE questionnaire – results of alternative cleaners and types of equipment to use will be discussed.)
- 4:45 PM Adjourn when presentations are outlined.

DAY 4 (Friday – May 24, 2002)

- 8:15 AM Debriefing, Discussion, Questions and Answers about the On-site Assessments. Attendees will compare assessment procedures and results by describing distinctions between the facilities/areas surveyed. There will be a final review and revision of draft assessment procedures, if necessary.
- 8:45 AM Groups will finalize a P2/waste reduction report presentation for each facility visited. The focus should be on process maps with waste streams identified and P2 opportunities.
- 9:15 AM Group spokesperson(s) will present findings. (20 minutes for each facility or area visited.)
- 11:15 AM Final Q & A and Discussions
- 11:45 AM Finish Filling out Training Evaluations
- 11:55 AM Adjourn